

What is claimed is:

1 1. A radio base station for performing a radio communication with  
2 a plurality of mobile stations with a space division multiplex  
3 method, the radio base station being characterized by:

4 transmitting an instruction to stop performing a  
5 diversity reception to a mobile station which the radio base  
6 station is to communicate with by the space division multiplex  
7 method.

1 2. The radio base station of Claim 1 comprising:

2 a creation means for creating a piece of traffic channel  
3 assignment information after receiving a traffic channel  
4 assignment request from a mobile station;

5 an attachment means for attaching the diversity  
6 reception stop instruction to the piece of traffic channel  
7 assignment information; and

8 a transmission means for transmitting the piece of  
9 traffic channel assignment information with the diversity  
10 reception stop instruction, to the mobile station as a response to  
11 the traffic channel assignment request.

1 3. The radio base station of Claim 1 comprising:

2 a determination means for determining, after receiving  
3 a traffic channel assignment request from a mobile station,  
4 whether to allow the mobile station to space-division-multiplex

5 with another mobile station which has communicated with the radio  
6 base station;

7 a creation means for creating a piece of traffic channel  
8 assignment information when the determination means determines to  
9 allow the mobile station to space-division-multiplex with the  
10 other mobile station;

11 an attachment means for attaching the diversity  
12 reception stop instruction to the piece of traffic channel  
13 assignment information; and

14 a transmission means for transmitting the piece of  
15 traffic channel assignment information with the diversity  
16 reception stop instruction, to the mobile station as a response to  
17 the traffic channel assignment request, and transmitting the  
18 diversity reception stop instruction to the other mobile station  
19 through a traffic channel.

1 4. A mobile station for performing a diversity reception, the  
2 mobile station having a plurality of antennas and comprising:

3 a judgement means for judging whether a diversity  
4 reception stop instruction has been received from a radio base  
5 station; and

6 a stop means for stopping the diversity reception when  
7 the judgement means judges that a diversity reception stop  
8 instruction has been received.

1 5. The mobile station of Claim 4, further comprising:

2 a reception means for receiving a piece of traffic  
3 channel assignment information from the radio base station as a  
4 response to a traffic channel assignment request sent to the radio  
5 base station, wherein

6 the judgement means judges whether the diversity  
7 reception stop instruction has been attached to the received piece  
8 of traffic channel assignment information.

1 6. The mobile station of Claim 5, wherein

2 the judgement means further judges whether data received  
3 by the reception means through a traffic channel includes the  
4 diversity reception stop instruction.